



# DEVELOPMENT

## SECURING COMMUNITY-BASED TENURIAL RIGHTS IN THE TROPICAL FORESTS OF ASIA:

### AN OVERVIEW OF CURRENT AND PROSPECTIVE STRATEGIES

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If the ever more serious problem of tropical deforestation in South and Southeast Asia has a solution, in many areas it lies among the large number of people living in "public" forest zones. Forest dwellers can and must play a role in any credible efforts to stop deforestation and to promote afforestation. Their involvement can be best supported in terms of law and policy by reinforcing or creating community-based tenurial incentives for managing natural resources sustainably. At present, however, "the political will and capacity to begin transferring authority to forest villages remains limited."<sup>1</sup>

Innovative strategies for promoting conservation and sustainable development are especially needed in areas that are occupied and still forested. Tens of millions of indigenous and other long-term occupants have resided in and around tropical forests for hundreds, and in some instances, thousands of years. Most rely, albeit in varying degrees, on community-based tenurial systems. These systems draw their legitimacy from the local population; they usually operate independently of state-created tenure systems; they tend to be customary and informal; and they frequently encompass an array of overlapping rights and duties.

Except for Papua New Guinea and other Pacific Island nations, community-based tenurial systems -- including rights to forests, land, water, and fisheries -- are seldom acknowledged by national governments in any meaningful way. This denial persists despite a growing body of literature that demonstrates that many resource-dependent peoples in rural areas possess local knowledge and a conservation ethos well-suited for managing local resources sustainably.<sup>2</sup>

Acknowledging the value and legitimacy of community-based tenurial systems should be a crucial and complementary component of any viable effort to conserve and develop tropical forest resources in an equitable and sustainable manner.<sup>3</sup> Some national

governments and international development agencies in South and Southeast Asia have begun to respond positively to this developmental imperative, and some of the responses are described in this paper. Nevertheless, with a few notable exceptions in India, and to a more limited extent in the Philippines, most rural peoples in South and Southeast Asian countries continue to have little, if any, influence over the formation and development of national laws and policies, including those that concern their cultures and the natural resources they depend on to live.

Forests and tenurial issues were addressed in May, 1990 by fifty professionals gathered in Bangkok to discuss agroforestry in the Asia-Pacific region. These experts "emphasized that tenurial reforms and farmers rights to use the trees were the major constraints in agroforestry," adding that though this has been known for years, as yet "no significant institutional reforms [have been made] to modify tenurial laws and procedures in favor of those practicing agroforestry."<sup>4</sup>

Even the presence of many forest dwellers is still not acknowledged by most national bureaucracies that possess legal jurisdiction over land and forest resources.<sup>5</sup> Forest dwellers who are acknowledged are almost always indiscriminately labelled as destroyers of forest resources. No matter how long they have occupied the forest, they are usually considered to be squatters illegally using state-owned resources.

The end result is that tens of millions of people residing in South and Southeast Asian forest zones live under a constant threat of being arbitrarily displaced and economically marginalized, oftentimes with state sanction. The threat ripens into "legal" eviction when government officials grant outsiders settlement rights or commercial concessions to extract or control natural resources in areas already occupied and utilized.<sup>6</sup>

At the same time, international development and policy institutions are hard-pressed to respond to the

challenges and opportunities posed by tenurial and management issues in ecologically fragile and biologically diverse areas. A major impediment is that national laws and policies concerning the allocation of legal **rights** to natural resources are still largely controlled by political and economic elites who profit from and therefore perpetuate the *status quo*?

### Forest-Dependent Constituencies

**C**oncurrent with the need to recognize and grant tenurial rights and incentives on behalf of forest dependent people, is the need to learn more about these constituencies. Remarkably, there are still almost no complete, accurate, and up-to-date country-specific demographic and related social science studies of rural people living in or directly dependent on forest, marine, and pastoral areas. Globally, forest-dependent people may number over 500 million.\* Of these, an estimated 200 million are indigenous and tribal people, many of whom reside in South and Southeast Asia?

The **total** number of people in Asian countries estimated **to be** either (a) directly dependent on tropical **forests**,<sup>10</sup> or (b) living on land classified as "public" forest ranges in the hundreds of millions. The dearth of demographic analysis makes it extremely difficult, and in some cases virtually impossible, to come up with any **firm** figures. Admittedly rough, but nevertheless reasonable, estimates made by non-government individuals and organizations include the following:

India: (a) **275 million**; (b) **100 million**;<sup>11</sup>  
 Indonesia: (a) ???; (b) **40 - 71 million**;<sup>12</sup>  
 Philippines: (a) **25 - 30 million** (b) **20 million**;<sup>13</sup>  
**Thailand** (a) **20 - 30 million**; (b) **14 - 16 million**;<sup>14</sup>  
**Myanmar** (Burma): (a) ???; (b) **8 million**;<sup>15</sup>  
 Papua New Guinea: (a) **3.5 million**; (b) **3.5 million**;<sup>16</sup>  
 Bangladesh (a) **10 million**; (b) **5 million**;<sup>17</sup> and,  
 Nepal: (a) ???; (b) **8.5 million**.<sup>18</sup>

**Millions** more people live in the classified forest regions of China, Indochina, Sri Lanka and northern Pakistan.<sup>19</sup>

These estimates include a dwindling number of hunter-gatherers and pastoralists. The hunter-gatherer population probably ranges in the hundreds of thousands. The largest number of pastoralists is in India, where they make up 6 percent of the national population, or approximately **45 to 50 million people**.<sup>20</sup> Compared to indigenous and tribal forest dwellers, however, many pastoralists in India possess more political power and have greater access to state decision-making processes on the allocation of legal rights to pasture **lands**.<sup>21</sup>

### The Tenure Imperative

Major structural and policy reforms are required to save and sustainably develop what remains of tropical forest resources in Asia. Fortunately, a fundamental

shift has started in how the international conservation community views **planning** in areas occupied and used by indigenous **people**.<sup>22</sup> The shift is even more evident in the indigenous and human rights communities and, more important, among indigenous peoples themselves. The key issue is tenure.

In affirming the principle of ethno - development and calling for greater participation of indigenous peoples in the development process, the fundamental issue is the recognition and protection of native land rights.<sup>23</sup>

The tenurial instability of forest dwellers frequently undermines short- and long-term customary incentives to conserve and sustainably manage natural resources and to make long-term improvements. It prevents many small-scale users from legally benefiting from their local natural resource bases. It generates animosity between small-scale users and natural resource officials and bureaucracies.<sup>24</sup>

Implementation of many conservation and development projects is often impeded and, in some instances, blocked because of insecure or conflicting property **rights**.<sup>25</sup> Even development projects in which tenure plays an integral role have **suffered**.<sup>26</sup> None of these developments should come as a surprise.

Officially sanctioned property rights mean, at bottom, the willingness of the state to step in **to** protect the interests of those holding the property rights under discussion. Without effective (or credible) enforcement one has anarchy; small wonder that the relentless theme of the propertied classes down through history has been to insist that the **primary** function of the state is to protect private property. One can search in vain for the dispossessed making a similar argument.<sup>27</sup>

By ignoring the rights of indigenous and migrant forest dwellers and insisting that forest resources are state owned, national governments have provided economic and political elites with easy legal access to forest resources, and enormous short-term profits have been made by the favored few. But the costs in terms of forest degradation have been staggeringly high.

The indiscriminate legal labelling of forest resources as public has effectively created "open access" situations that undermine community-based tenure, encourage "legal" and illegal use and extraction of natural resources, and promote migration and greater population density in ecologically fragile areas.<sup>28</sup> At the same time, natural resource bureaucracies in most national and state governments exercise an exclusive legal authority to grant rights to outsiders engaged in capital-intensive commercial-extraction endeavors, but lack the institutional and financial capacities to manage and protect the forest resources under their **jurisdiction**.<sup>29</sup>

These problems highlight the need to, among other things, ensure that small-scale resource users in South and Southeast Asia possess short- and long-term

incentives to conserve and sustainably develop the natural resources located within and around their communities. The most effective and cost-efficient specific solutions will entail either the recognition of existing, community-based customary rights or the granting of community rights through social forestry programs.

Most national governments, however, continue to view community-based tenure systems with indifference and, in some cases, hostility.<sup>30</sup> They overlook the fact that many of these systems often promote sustainable and environmentally sound development.<sup>31</sup>

Not all forestdependent people, of course, rely on community-based tenure systems. Nor do existing systems always promote environmentally benign or equitable outcomes. Growing populations and the emergence of global and regional markets, in particular, have created an array of demographic pressures and economic incentives that affect, and sometimes undermine, sustainable community-based tenure systems. As such, many systems are under great stress and in some areas they have all but disintegrated.

Even where community-based tenure is non-existent, however, there will often still be a need for local involvement in the management of tropical forest resources. The case for creating such systems, therefore, is now being made, and in some instances has been carried out.<sup>32</sup>

### Community-Based Tenure

The distinguishing characteristic of community-based tenure systems is that their *primary legitimacy is drawn from the community in which they operate and not from the nation state in which they are located*. In other words, local participants are the primary allocators and enforcers of local rights to forest resources, not the national government.<sup>33</sup> This is true whether the system covers private or public land.

National strategies for conserving and developing natural resources located within community-based tenure systems should likewise rely on local peoples. Participants in these systems are well aware of their rights and duties. National elites and officials in development agencies need not be so familiar.

This important point is usually overlooked. Few tenure specialists still propound the "tragedy of the commons" thesis so popular during the 1970s and early 1980s.<sup>34</sup> Instead, a new paradigm is emerging. The new paradigm

seeks a new balance between community-based management and management by governments. It links equity issues with conservation by showing that a particular resource may be most effectively conserved under the control of a group of users who depend on it to meet their own needs.<sup>35</sup>

Community-based tenure can encompass various types of rights. As with state-created rights, none of these are absolute and permanently fixed. For purposes of simplification, natural resource rights can be broken down into six general categories: 1) rights of direct use; 2) rights of indirect economic gain; 3) rights of control; 4) rights of transfer; 5) residual rights; and 6) symbolic rights.<sup>36</sup>

These rights may be held by an individual, a nuclear or extended family (clan), a neighborhood, or the community as a whole. Tenurial rights often overlap and invariably encompass spatial, temporal, demographic, and legal dimensions. Tenure specialists acknowledge the complexity when they describe tenure as encompassing a "bundle of rights." Indeed, terms such as "ownership" and "leasehold" -- all too often used to oversimplify the complex nature of the rights being investigated -- can be better understood and addressed under the "bundling" concept.

Despite the complexities of community-based tenure systems, their recognition by governmental laws and policies should not be contingent on project planners and implementers first becoming familiar with the intricacies and nuances of these regimes. Only a general familiarity with the existence and viability of community-based tenure systems is necessary. *Requiring that intra-community tenurial variations be specifically addressed in policies, programs and projects will complicate, and even block, widespread systemic efforts to support and gain legal recognition for community-based tenure systems.* It will make recognition efforts more complicated, prolonged, and expensive than they need be.<sup>37</sup> It will also raise the likelihood that existing viable systems will be unnecessarily disrupted.

This is not to say that there is no need for research concerning community-based tenure. There is much to be learned about the procedural and substantive aspects of these systems.<sup>38</sup> The point being emphasized is that there should be no requirement that government officials and project planners and implementors become familiar in any great detail with the internal aspects of a specific system of community-based tenure before that system can be recognized or otherwise be sanctioned by national laws and policies.

At the same time, government officials and development practitioners should understand several seemingly abstract but important theoretical issues that concern community-based tenure. Perhaps foremost is the need to clarify and redefine current perspectives on the differing types of property rights.

Most common property theorists believe that there are four basic categories of property rights: private, common, state, and open access (i.e., no-property rights).<sup>39</sup> There are two major flaws with this categorization scheme. The first is that the scheme treats

private ownership as if it synonymous with individual ownership.<sup>40</sup> The second is that, whether intentional or not, it virtually requires that individual and group rights in a community-based tenurial system be disentangled and separated as a precondition to recognition.

These theoretical flaws can be easily corrected while simultaneously simplifying tenurial analysis. The key is in limiting ownership categories, for policy and project purposes, to four possible combinations: 1) *private individual*; 2) *private group*; 3) *public individual*; and 4) *public group*.<sup>41</sup>

Each combination refers to a bundle of rights. "Public" is used as a legal label applied by the state to natural resources ostensibly owned by the state. "Private" refers to land rights owned by non-state entities, whether individually or as groups. Private rights should not always be contingent on state grants or documentation. Private rights, however, are usually subject to a lesser degree of governmental regulation than rights to "public" resources. In addition, governments are usually obliged to give better notice, and pay more compensation, before private rights can be expropriated for public purposes.

The point being emphasized is that no property rights, including private ones, are absolute; all rights are subject to regulation. The recognition or grant of private rights, therefore, does not preclude governments from taking steps to ensure that the affected resources are managed or exploited sustainably, and from intervening when they are not. Zoning laws are a prime example of this governmental prerogative, and in some instances forest zoning laws and policies may be desirable.

Another important theoretical issue that distorts much analysis of tenurial issues is the popular belief that people can actually "own" land or other natural resources. In fact, all legal relations are between persons. *There is no such thing as a legal relation between a person and a thing.* Although legal rights often appear at first glance to concern relations between people and material objects, the fundamental relationship is between people: it involves the status they have vis-a-vis each other insofar as particular objects, such as land and forest resources, are concerned.<sup>42</sup>

This insight is gaining acceptance among scholars who study common property.<sup>43</sup> It has obvious and immediate relevance for any analysis, as well as for policy- and legal-prescriptions. Policies and laws are prescribed by governments as the means for allocating and regulating rights to land, forest, and marine resources. But, contrary to what many people think, the rights created are not actually to the natural resources. Rather, the rights create a special social status. Those holding land, tree, hunting, gathering, or fishing rights are entitled to use the resources in certain ways, and they can usually deny other people similar access.

Understanding the social nature of rights helps clarify the nature of tenure. It also serves to demythologize the emotional attachments often cited by holders of governmentally recognized tenurial rights to natural resource in their efforts to preserve what for them is a favorable status quo.

## Existing and Prospective Community-Based Tenure Programs

### Recognition of Community-Based Tenurial Rights

In most cases, the best governmental response to community-based tenure would be to officially recognize and delineate the perimeters of existing systems, especially in areas where local resource users have a demonstrable concern for the environment and a desire to manage it sustainably.<sup>44</sup> International law provides a basis for the recognition and protection of these systems and the rights they contain, at least insofar as indigenous and tribal peoples are concerned.<sup>45</sup> In some instances, therefore, the legal efficacy of existing community-based tenure systems need not be contingent on grants or documents from national or local governments. In addition, in some countries, such as the Philippines and Indonesia, there are existing national laws mandating recognition, but these have not yet been effectively invoked or enforced.<sup>46</sup>

The legal recognition and delineation of community-based tenure systems would, in effect, repeal or override existing national laws and policies in many countries that promote "open access" to "public" forest zones. This, in turn, would discourage migration, as well as illegal extraction and over-exploitation. It would also put current and prospective concessionaires on notice that legal rights to extract natural resources within areas covered by community-based tenure are subject to community approval and profit sharing.

Perhaps most important, recognition of community-based tenure rights would align national governments with -- and officially tap the energies and potential of -- forest-based communities that have resisted migration and externally supported extraction activities within their territories. It would also give an official imprimatur to ongoing local efforts to protect and conserve tropical forests.<sup>47</sup>

There are also economic and developmental reasons for formally delineating the perimeters of community-based tenurial systems. Perimeter delineation would obviate the need for national governments to conduct more expensive and culturally disruptive surveys of individual property rights. More important, it would enable governments to determine the exact location and size of indigenous territorial domains within tropical forest zones. If this information were in hand, governments could better formulate more

appropriate natural resource policies and projects and implement them more equitably and sustainably.

The USAID-funded Central Selva Natural Resource Management Project in Peru's Palcazu Valley provides a valuable insight into the importance of addressing tenure and responding to local conditions early on. The project area encompassed the homeland of approximately 8000 Amuesha and Campa native people, but this fact was originally overlooked. Opposition by the Amuesha and Campa peoples and their supporters prompted a review, and ultimately a revision, of the original project design to make it more responsive to local needs and contributions. The foremost need was for secure titles, and the project helped local people get them.

The history of the Central Selva Natural Resource Management Project demonstrates that native rights and interests can be included in a regional resource management plan without sacrificing either local or national goals.

The key to such a plan lies in the recognition and protection of native land rights and the promotion of development projects for local residents rather than outside, intrusive populations.<sup>48</sup>

**Similar** insights come from conservation projects in other parts of the developing world, including Papua New Guinea,<sup>49</sup> Nepal,<sup>50</sup> Pakistan<sup>51</sup> and the Philippines.

The Philippine Government's Department of Environment and Natural Resources has begun developing institutional processes for delineating indigenous territorial **perimeters**.<sup>52</sup> But even in that **country, as** elsewhere, the conventional forestry sector largely continues to ignore issues related to the recognition or grant of community-based territorial rights. The Forest Management Bureau operates on the mistaken premise that recognizing or granting community-based tenure rights will eliminate the need for foresters to help manage forest resources within indigenous territorial perimeters.

**In fact, delineation of community-based territorial perimeters and recognition or grant of tenurial rights will not eliminate the role of foresters or government agencies with legal jurisdiction over forest resources.** Instead, it will promote an alliance between governments and forest-dependent communities. Delineation and the recognition or grant of tenurial rights should help alleviate, at least in the short term, some of the pressures **on** remaining forest resources and help ensure that forest dwellers **are** involved in and profit from official forest development activities. The recognition or grant of community-based tenurial rights, however, should not effect current or prospective forestry extension services.

For decades, agricultural extension agents have helped rural farmers by promoting productivity and sustainable resource management. Yet these agents do not control **the** tenurial rights of their target constituencies. If

specific forest-farming practices have to be regulated or curtailed, rural zoning laws can be enacted.

### Social Forestry Grants

Opposition by political and economic elites in most South and Southeast Asian countries to recognition strategies -- and their insistence that legal rights to natural resources are contingent on state grants **and** documents -- ensures that most efforts to promote recognition of community-based tenurial rights will likely bear fruit only over the long term. Over the short term, official strategies for securing forest dwellers tenurial rights will likely occur by way of grants made under the auspices of government-sponsored social forestry programs. Although social forestry programs vary from country to country, and in some cases even within countries, in every instance government bureaucracies with legal jurisdiction over "public" forests grant tenurial rights for limited periods of time and retain the power to cancel them.

The two most innovative, community-based social forestry grant-programs in South and Southeast Asia are in the Philippines and the Indian state of West Bengal. The Philippine program promotes forest conservation. Twenty-five year communal forest leases are granted by the Forest Management Bureau of the Department of Environment and Natural Resources. Renewable for an additional twenty-five years, the leases are predicated on a Community Forest Stewardship Agreement between the community and the forestry bureau. In essence, the community promises to cooperate with the forestry bureau **to** protect still-forested areas while the bureau agrees to legalize the community's occupation and utilization of the leased area for non-commercial purposes.

As of mid-year 1992, twenty-one agreements covering 67,757 hectares had been signed as part of the Philippines program. On balance, most agreements have benefited the communities by legitimating their ancestral rights and providing government support for efforts to keep migrants and illegal users outside of the communal perimeters. (Ironically, though, the communities were compelled to lease land that they already **owned**.)<sup>53</sup> The forestry service has also benefited by what is in essence free reforestation and conservation man-hours donated by community members."

Government forestry officials' main role has been helping the grantees keep migrants from encroaching into the delineated areas. As a direct result, forests within the perimeter of most leased areas have continued to be used sustainably, shielded from the demands of a growing number of migrant farmers. Meanwhile, immediately outside several leased areas migrants have established claims and clearings and deforestation is widespread.<sup>55</sup>

The ~~West~~ Bengal program, by contrast, is largely geared toward rehabilitating degraded forests. Its cornerstone is a community-established Forest Protection ~~Committee~~ that ~~has~~ entered into a Joint Management Agreement (MA) with the West Bengal Forest Department.

The MA is more restrictive than the Philippine community forest lease. It legalizes the non-commercial extraction of forest resources by community members, but it prohibits any agricultural and grazing activities on land within the perimeter of the area covered by the agreement. Unlike the Philippine lease, however, the **JMA** anticipates the eventual commercial exploitation of trees and guarantees that 25 percent of the proceeds from the sale of any mature trees will go the Forest Protection committee."

The Royal Thai Government, acting primarily through the Royal Forestry Department (RFD), by contrast, still fails to appreciate the conservation and entrepreneurial ethos of many rural resource users. Instead, the **RFD** is implementing a forestry policy which provides for reclassifying areas still covered with forests as protection forests, national parks and wildlife sanctuaries. People living within these areas will continue to be ineligible to receive any grant of tenurial rights under the government's existing social forestry program, and they will remain liable to be evicted.

Forest managers in degraded areas designated as commercial/production forests might benefit from a proposed new Community Forest Law (that was still awaiting enactment in mid-year 1992) by acquiring some degree of tenurial security. Participation, however, is anything but assured. Instead, ~~many~~ people are likely to continue losing out to large-scale, government-sponsored efforts to promote commercial plantations and "protect" remaining forests by removing people, including long-term occupants. Even more ominous, the RFD has embarked on a massive, forced eviction scheme **known as** the *Khor Jor Kor* program which may eventually uproot as many as 1.5 million

The situation for forest dependent people in Indonesia is **also** bleak. Although estimates of the number of forestdwelling people in the Outer Islands range **as high as 71 million**, the Indonesian government still does not even have a social forestry program in the Outer Islands.<sup>58</sup> The Java Social Forestry **Program**, meanwhile, grants tenurial rights for only two years or less. The program "has made only modest success toward facilitating genuine participation in forest management through the formation of farmer groups and conclusion of joint-management **contracts**."<sup>59</sup>

## Opportunities for Additional Analysis and Action

**As** the foregoing discussion implies, scholars, activists **and** policy-makers should continue taking a proactive and multifaceted role in encouraging governments in Asia and elsewhere to address in an equitable and locally responsive manner the growing array of problems associated with forest-dependent people and tropical deforestation. In regards to legal and social issues, the following actions are recommended:

1. **Promote laws and policies**, including the design and implementation of projects, **that provide for the recognition and delineation of community-based tenurial systems**, and the creation or strengthening of social forestry programs.
2. **Fund research into the number, location, and resource - utilization practices of people living within or directly dependent on tropical forests**. Besides basic demographic research, recommended topics for inquiry include:
  - a. the nature of customary forms of resource tenure and use, including:
    1. the processes by which claims are established and rights are allocated and **enforced**;<sup>60</sup>
    2. the equitable or inequitable outcomes of these processes, especially in comparison with rights allocated pursuant to national laws in nearby areas;
    3. the connection between customary forms of resource tenure and the incentives they provide for the adoption and/or maintenance of conservation and sustainable development practices;
    4. the connection between customary forms of resource tenure and productivity; and,
    5. the role of women in natural resource allocation and use [special laws, policies and programs should be developed to empower women formally and **help** them, **as individuals or groups**, to use and manage natural resources better];<sup>61</sup>
  - b. the changes that customary forms of resource tenure are undergoing and the **primary** external and internal reasons for the changes, including the effect of tenurial interventions undertaken by governments;
  - c. the effects that existing national and state-level laws and policies have on local **systems** for using resources, especially those **that** governments claim **to** own but lack the bureaucratic capacity to manage;
  - d. the identification and development of efficient and equitable processes and forums for resolving local inter-community tenurial disputes over natural resources.
3. **Fund country-specific research on alternative legal strategies for recognizing and granting tenurial rights to forest resources**. **As demonstrated** in Indonesia, the Philippines, and Sri Lanka,<sup>62</sup> these strategies need not necessarily be contingent on substantive changes in existing tenurial laws and policies. But many short-term strategies do require the identification **and** even reinterpretation of existing laws for acquiring property rights or getting existing rights recognized.
4. **Strengthen natural resource bureaucracies, focusing especially on retraining and more culturally appropriate and responsive extension and educational services**. A first step is reappraising

long-standing bureaucratic perspectives on small-scale resource users.<sup>63</sup> Another is providing government officials who have jurisdiction over natural resource issues, whether locally, regionally or nationally, with training in how to communicate with and learn from rural peoples, especially those from different educational, economic, and ethnic backgrounds. For starters, forestry schools should be encouraged to open their faculties to social scientists and their curriculums to related courses in history, anthropology, sociology, economics, and political science.

5. *Finally, strategies for strengthening local NGOs and community-based organizations should be identified, developed, and implemented with the interrelated issues of equity and the environment in mind.*

Organizations that promote equity and environmental sustainability are burgeoning throughout South and Southeast Asia, and they merit more financial and organizational support.<sup>64</sup>

### Conclusion

The growing crises spawned by tropical deforestation require innovative, comprehensive, and cost-efficient responses. Even these responses will fail in many areas unless the tenurial rights, claims, and potentials of forest dwellers -- particularly long-term occupants reliant on community-based tenurial systems -- are addressed. The challenges are daunting but the specter of tropical deforestation requires that governments face them now.

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## Endnotes

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2. See, e.g., S.C. Chin, "Do Shifting Cultivators Deforest?" *Forest Resources in the Third World*, Penang: Sahabat Alam Malaysia, (1987); Jaganath Pathy, "Shifting Cultivators of India: Bearing the Brunt of Development," *Forest Resources in the Third World*; Evelyn Hong, "Forest Destruction and the Plight of Sarawak's Natives," *Forest Resources in the Third World*; Gerald Marten, *Traditional Agriculture in Southeast Asia: A Human Ecology Perspective* (1986); Michael Dove, *Swidden Agriculture in Indonesia: The Subsistence Strategies of the Kalimantan Kantu'*, Berlin: Mouton Press (1985); Michael Dove, "Government Perceptions of Traditional Social Forestry in Indonesia: The History, Causes and Implications of State Policy on Swidden Agriculture," *Community Forestry: Socio-Economic Aspects*, Rome: Food and Agricultural Organization (1985); Michael Dove, "Swidden Agriculture and the Political Economy of Ignorance," *Agroforestry Systems*, Vol. 1 (1983); Harold Olofson, ed., *Adaptive Strategies and Change in Philippine Swidden-based Societies*, Los Baños: Forestry Research Institute (1981); Terry Grandstaff, *Shifting Cultivation in Northern Thailand*, Tokyo, United Nations University (1980); Joseph Weinstock, Land Tenure Practices of the Swidden Cultivators of Borneo, Master's Thesis, Cornell University (1979); J.E. Spencer *Shifting Cultivation in Southeast Asia*, Berkeley: University of California (1966); Harold Conklin, *Hanunoo Agriculture: A Report on an Integral System of Shifting Cultivation in the Philippines*, Rome: FAO (1957).
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4. "Agroforestry Experts Meet At Bangkok," *Tigerpaper*, Vol. 17 (April-June, 1990), p. 16
5. See Owen Lynch, *Whither the People? Demographic, Tenurial and Agricultural Aspects of the Tropical Forestry Action Plan*, Washington: World Resources Institute (1990).
6. See, e.g., Larry Lohmann, "Commercial Tree Plantations in Thailand: Deforestation by Any Other Name," *The Ecologist*, Vol. 20 (1990); Owen Lynch, "Withered Roots and Landgrabbers: A Survey of Research on Upland Tenure and Displacement," *Uplands and Uplanders: In Search of New Perspectives*, Charles Castro, ed. Quezon City: Bureau of Forest Development (1984); Peoples Union for Democratic Rights, *Undeclared Civil War: A Critique of the Forestry Policy*, New Delhi: PUDR (1982).
7. It is estimated that in developing countries "public" forest land encompasses over 80% of the closed forest. See Jean-Paul Lanley, *Tropical Forest Resources* (FAO Forestry Paper No. 30, 1982), pp. 49-53.
8. John Spears and Edward S. Ayensu estimated five years ago that "there are some 200 million people living in tropical forests." "Resources, Development, and the New Century: Forestry," *The Global Possible: Resources, Development, and the New Century*, Robert Repetto, ed. New Haven: Yale University Press (A World Resources Institute book), p. 304. Norman Myers estimated that "forestland farmers" and their progeny number between 300 million to 500 million. *Deforestation Rates in Tropical Forests and their Climatic Implications*, London: Friends of the Earth (1989), p. 68. Myers added that the larger figure "may well be an under-estimate."
9. The estimate of the number of tribal people is provided by Survival International, a London-based human rights organization which advocates on their behalf.
10. The definition of "dependent" used in this paper is limited to mean people extracting timber or other forest products for personal consumption or for direct sale. It excludes people who purchase forest products extracted by others. It also excludes people employed by timber companies or wood processing industries and who do not directly extract forest resources for consumption or sale. Degrees of dependency obviously vary a great deal and, in many instances, increase or decrease on a seasonal basis.
11. N.G. Basu, *Forests and Tribals*, Calcutta: Manisha (1987). Basu's estimated that 94 percent of India's 52 million tribal people as of 1980 lived in and around forests. The number of tribals in India as of 1991 is in the range of 100 million. S.B. Roy, Chairman of the Indian Institute of Bio-Social Research and Development, a professional organization recognized by the Governments of India and West Bengal. Personal communication, August, 1991. Using Basu's percentage that would mean that 94 million tribals now reside in and around forest lands.
12. Mark Poffenberger estimates that 65 million people live on state forest land in the Outer Islands. Personal communication, 1991. This estimate is an increase over an earlier one of 30 to of 40 million people. See, M. Poffenberger, "Facilitating Change in Forest Bureaucracies," *Keepers of the Forests: Land Management Practices in Southeast Asia*, West Hartford, CT: Kumarian Press (1990), p. 101. Charles Zerner's estimate is more conservative and includes 6 million people on Java and 25 million on the Outer Islands. See, C. Zerner, Community Rights, Customary Law, and the Law of Timber Concessions in Indonesia's Forests: Legal Options and Alternatives in Designing the Commons (FAO Forestry Studies UTF/INS/065, March 1990), p. 10.
13. Ma. Concepcion Cruz, personal communication, 1991. See also Ma. Concepcion Cruz, *Population Pressure and Migration: Implications for Upland Development*, Los Baños: Center for Policy and Development Studies Working Paper 86-06 (1986). The 1991 estimate includes approximately 8.5 million indigenous people, of whom six million are generally considered to be tribal. Indigenous territorial rights cover an estimated four to eight million hectares of the fifteen plus million hectares of classified forest land.
14. Witoon Permpongsacharoen, Project for Ecological Recovery, Bangkok, and Larry Lohmann, *The Ecologist*, London, personal communication, 1990. One estimate

holds that approximately 5.3 million hectares, or about one-fifth of classified forest land, is occupied and cultivated. Gershon Feder, et al., *Land Policies and Farm Productivity in Thailand*, Baltimore: John Hopkins University Press for the World Bank (1988), p. 17.

15. The vast majority of tribal peoples in Myanmar live in the classified forest zone as do a smaller number of Burmese. In 1981 the FAO estimated that the number of rural people living in hilly areas and practicing shifting cultivation was 4.25 million. *Tropical Forest Resources Assessment Project: Forest Resources of Tropical Asia*, p. 165.

Estimates of the number of tribal people in Myanmar vary widely. A standard estimate is that they comprise 15 to 17 percent of the total national population of 42 million, or approximately 6 to 8 million people. Charles F. Keyes, "Tribal Peoples and the Nation-State in Mainland Southeast Asia," *Southeast Asian Tribal Groups and Ethnic Minorities: Prospects for the Eighties and Beyond*, Ruth Tasswell, ed., Cambridge, MA: Cultural Survival (1987), p. 19. Others estimate that the ethnic "minorities" actually number 25 million and comprise 55 percent of the nation's total population. Personal communication, Christian P. Scherrer, University of Zurich (August 1990).

16. The year-end 1990 population of PNG was estimated to be slightly over 4 million, the vast majority of whom are rural forest dwellers.

17. Mohiuddin Farooque, Principle Executive, International Institute of Environmental Studies and Disaster Management, Dhaka, personal communication, August 1991. This estimate includes 600,000 people who are directly dependent on the Sundarban forest. Robert Winterbottom, *Sustainable Development of Forest Resources in Bangladesh: Challenges and Opportunities*, World Resources Institute, 1990. A similar number belong to one of the thirteen indigenous hill tribes in the Chittagong Hill Tracts. It does not include the growing number of Bengalis migrating in the Chittagong area. Bernard Nietschmann, "Economic Development by Invasion of Indigenous Nations," *Cultural Survival Quarterly*, Vol. 10 (1986).

18. William Magrath and John Doolittle, *Watershed Development in Asia: Strategies and Technologies*, Technical Paper No. 127, Washington, DC: World Bank (1991), Table L4, p. 6. The table contains the estimates of World Bank staff of upland (over 30% slope) populations in various Asian countries. The overall estimate exceeds 127 million people.

19. A 1981 FAO assessment of forest resources noted severe population pressures on forest resources in Sri Lanka and Pakistan, but it contained no forest-zone population estimates. *Tropical Forest Resources Assessment Project: Forest Resources of Tropical Asia*, Rome: FAO (1981), pp. 365 and 425. For an overview of recent legal and policy developments in Sri Lanka see Sumudu Withange *Towards Legal Protection of Tropical Forests*. Dehiwela: Sri Lanka Environmental Congress (1991).

20. Anil Agarwal, Human-Nature Interactions in a Third World Country, Fifth World Conservation Lecture, London, WWF-IUK (1985).

21. Richard P. Tucker, "The Evolution of Transhumant Grazing in the Punjab Himalaya," *Mountain Research and Development*, Vol. 6 (1986), pp. 26-27.

22. Preface by Shelton Davis in Peter Poole, *Developing a Partnership of Indigenous Peoples, Conservationists, and Land Use Planners in Latin America* (Washington, World Bank PPR Working Paper, 1989), p. ii. This insight is shared by other international land tenure specialists. See, e.g., Daniel W. Bromley and Michael M. Cernea, *The Management of Common Property Resources*, pp. 5-6. In the words of Bromley and Cernea:

The development community has gradually come to realize that it will not be successful in addressing resource degradation at the local level so long as the very nature of property and authority systems over natural resources are seriously misunderstood in policy formulation and the design of donor-assistance programs.

23. Shelton H. Davis, *Indigenous Peoples, Environmental Protection and Sustainable Development*, Gland, Switzerland: International Union for the Conservation of Nature and Natural Resources (1988), p. 7.

24. See, e.g., Ramachandra Guha, *The Unquiet Woods: Ecological Change and Peasant Resistance in the Himalaya*, New Delhi: Oxford University Press (1989); Nancy Peluso, *Rich Forests, Poor People, and Development: Forest Access, Control and Resistance in Java*, Berkeley: University of California Press (1992).

25. A survey of forty-two World Bank development projects revealed that "land problems delayed project implementation in one-third of the projects." Raymond Noronha and Francis J. Lethem, *Traditional Land Tenures and Land Use Systems in the Design of Agricultural Projects*, World Bank Staff Working Paper No. 561 (1983), p. 5.

26. Transmigration sites in Indonesia are chronically hampered by the absence of legally secure titles which can be used to recognize and protect property rights, obtain credit and dissuade people from abandoning project areas. See, e.g., Charles V. Barber, *The State, The Environment and Development: The Genesis and Transformation of Social Forestry Policies in New Order Indonesia* (doctoral dissertation, School of Law, University of California at Berkeley, 1989); Charles Zerner, *Community Rights, Customary Law and the Law of Timber Concessions in Indonesia's Forests* (March 1990).

A nation-wide contract reforestation project in the Philippines currently being funded by the Asian Development Bank and the Government of Japan, for example, is encountering resistance in many forest communities because the project planners failed to address local concerns over land rights in a coherent and systemic manner.

27. Daniel W. Bromley, *The Commons, Property, and Common Property Regimes*. Paper presented at the First Annual Meeting of the International Association for the Study of Common Property, Durham (September 1990), p. 21.

28. See, e.g., Ma. Concepcion Cruz, Carrie A. Meyer, Robert Repetto, and Richard Woodward, *Population, Poverty and Environmental Stress: Frontier Migration in the Philippines and Costa Rica*, Washington, DC: World Resources Institute (1992); Ma. Concepcion Cruz, *Population Pressure, Deforestation, and Common Property Institutions: An Overview*. Paper prepared for the Second Annual Meeting of the International Association for the Study of Common Property, Winnipeg (1991); Jeffrey A. McNeely, *Common Property*

Resource Management or Government Ownership: Improving the Conservation of Biological Resources. Paper Presented at a Conference on Incentives and Constraints: Macroeconomic Policy Impacts on Natural Resource Utilization, Smithsonian Institution (May 1989); Douglas Southgate, "The Causes of Land Degradation along 'Spontaneously' Expanding Agricultural Frontiers in the Third World," *Land Economics*, Vol. 66 (1990).

29. Mark Poffenberger noted "growing concern over the inability of Asia's national forestry agencies to sustainably manage vast areas of state-controlled forests. 'Facilitating Change in Forestry Bureaucracies,' *Keepers of the Forest*, cited in footnote 1 at p. 101. In the Philippines, the overreach of the forestry and fisheries bureaucracies prompted the World Bank to propose a "policy of divestiture" which would require the national government to constrict its jurisdictional claims of "public" ownership and better target its resources. World Bank, *Philippines Environment and Natural Resource Management Study*, Washington, DC: World Bank (1989).

30. See, e.g., N.S. Jodha, Rural Common Property Resources: Contributions and Crisis. Foundation Day Lecture of the Society for the Promotion of Wastelands Development, New Delhi (May 1990); Douglas Southgate and Peter May, The Suppression of Common Property in Latin America. Paper presented at the First Annual Meeting of the International Association for the Study of Common Property, Durham, NC (September 1990).

31. See, e.g., C. Ford Runge, "Common Property and Collective Action in Economic Development," *World Development*, Vol. 14, No. 5 (1986).

32. Most Forest Protection Committees in the widely praised West Bengal program were non-existent prior to establishment of the program in the early 1970s. By the early 1990s, over two thousand committees had been created. See, e.g., S.B. Roy, "Forest Protection Committees in West Bengal: Emerging Policy Issues", *Voices from the Field: Fourth Annual Social Forestry Writing Workshop*, Honolulu: East-West Center (1991), pp. 1-13.

33. Some tenure specialist might object that it is erroneous to include individual rights in reference to community-based resource management systems. This objection, however, fails to account for the legal foundation, i.e. local communities, from which individual customary rights draw their authoritativeness.

34. The classic essay which expounded this theory was Garrett Hardin's "The Tragedy of the Commons" which was published in the December 13, 1968 issue of *Science* at pp. 1243-48.

35. Fikret Berkes and David Feeny, "Paradigms Lost: Changing Views on the Use of Common Property Resources," *Alternative*, Vol. 17 (1990), p. 48. Some tenure specialists, however, still cling to ideas which equate common property with open access system of resource management. See, e.g., William Magrath, *The Challenge of the Commons: The Allocation of Nonexclusive Resources* (World Bank Environment Department Working Paper No. 14 (1989)). Magrath distinguishes common property from open access. But he oversimplifies the nature of common property by referring to it as "nonexclusive" (e.g., paragraph 71, and by stating that common property resources "are owned by everyone" (e.g., paragraph 65). Other specialists now recognize that common property management systems do not provide all members of a

community with equal rights to all community resources. See, e.g., Daniel Bromley and Michael Cernea, *The Management of Common Property Resources: Some Conceptual and Operational Fallacies*, [complete citation]; Ronald Oakerson, A Model for the Analysis of Common Property Problems, *Common Property Resource Management*, Washington: National Science Foundation (1986), pp. 13-30.

36. See Ron Crocombe, "An Approach to the Analysis of Land Tenure Systems," *Land Tenure in the Pacific*, R. Crocombe, ed., Melbourne: Oxford University Press (1971), pp. 5-6.

37. Some promoters of recognition might criticize the methodology's aversion to gathering too many details about customary property rights, as well as its greater emphasis on state laws and policies. Any systemic and comprehensive national recognition strategy, however, will involve thousands of communities and must involve the state.

38. See Part VII, of this paper for a list of recommended research topics.

39. See, e.g., Fikret Berkes and David Feeny, "Paradigms Lost: Changing Views on the Use of Common Property Resources," *Alternatives*, Vol. 17 (1990); Daniel W. Bromley, "Property Relations and Economic Development: The Other Land Reform," *World Development*, Vol. 17, No. 6 (1989), pp. 867-877.

40. Daniel Bromley recognizes that individually and corporately held customary property rights may be private but apparently does not acknowledge that community-based tenure systems as a whole may likewise be private. See e.g., Daniel Bromley, *The Commons, Property, and Common Property Regimes*. Paper presented at the first annual meeting of the International Association for the Study of Common Property, Raleigh Durham (1990).

41. Individual private rights are typified by Torrens titles. Individual social forestry leases are examples of public individual rights. Philippine ancestral domains provide examples of undocumented, private, group rights. Communal forest leases in the Philippines exemplify public group rights. For further elucidation see Owen Lynch and Kirk Talbott, "Legal Responses to the Philippine Deforestation Crises," *New York University Journal of International Law and Politics*, Vol. 20 (1988).

42. This insight is referred to by legal theoreticians as the Hohfeldian premise. For further elucidation see Wesley N. Hohfeld, "Fundamental Legal Conceptions as Applied in Judicial Reasoning," *Yale Law Journal*, Vol. 26 at 710 (1917).

43. See, e.g., Daniel W. Bromley, "Property Relations and Economic Development: The Other Land Reform," *World Development*, Vol. 17, No. 6 pp. 867-877 (1989).

44. This strategy may not apply in regions, such as in some parts of India, where customary property rights of different castes and ethnic groups extensively overlap. But it should apply in Indian locales where common property management systems exist and are still viable. See, e.g., N.S. Jodha, Rural Common Property Resources: Contributions and Crisis. Foundation Day Lecture of the Society for the Promotion of Wastelands, New Delhi (May 1990).

45. The leading international human rights instrument calling for recognition of indigenous territorial rights is the International Labor Organization's 1989 Convention No. 169 Concerning Indigenous and Tribal Peoples in Independent Countries. Article 13 of the Convention specifies that references in it to land "shall include the concept of territories, which covers the total environment of the areas which the people concerned occupy or otherwise use."

Article 14 mandates recognition of the rights of indigenous peoples to own and possess their traditional territories. See also Roger Plant, *Land Rights for Indigenous and Tribal Peoples in Developing Countries: A Survey of Law and Policy Issues, Current Activities, and Proposals for an Inter-Agency Programme of Action*, Geneva: International Labour Office (1991); Darrell A. Posey, *Intellectual Property Rights for Native Peoples: Challenges to Science, Business, and International Law* (a paper prepared for an International Symposium on Property Rights, Biotechnology and Genetic Resources in Nairobi, March, 1991).

Additional support in international law for recognition of the community-based tenurial systems for can be found in the United Nations Covenants on Civil and Political Rights and Economic, Social and Cultural Rights, as well as the International Court of Justice's *Western Sahara* decision of 1975. *ICI Reports*, Vol. 4.

46. See, e.g. Owen Lynch and Kirk Talbott, "Legal Responses to the Philippine Deforestation Crises," *New York University Journal of International Law and Politics*, Vol. 20 (1988); Sandra Moniaga, "Towards Community-Based Forestry and the Recognition of Adat Property Rights in the Outer Islands of Indonesia: A Legal and Policy Analysis," *Voices from the Field: Fourth Annual Social Forestry Writing Workshop*. Honolulu: East-West Center (1991).

To help identify existing national legal mandates for recognizing community-based tenure rights, the World Resource Institute's Customary Property Rights and Natural Resource Management Project is conducting case studies in Papua New Guinea, Sri Lanka, Indonesia, the Philippines, Thailand, Nepal, and possibly other Asian countries.

47. The issue of whether community-based tenure rights are private or public need not be addressed in the initial stages of implementing a recognition or grant policy. Political considerations within a specific national context may weigh in favor of avoiding any early determination.

48. Shelton H. Davis, *Indigenous Peoples, Environmental Protection and Sustainable Development*, pp. 11-12. A case study of land management practices in the national forests of Guesselbodi and Gorou-Bassounga, Niger reached a similar conclusion. "The major factor upon which the success of large-scale management programs will depend is active popular participation .... This will require natural resource management agencies to regard their role in a new light; as a partner with local villagers in sound management rather than custodian of a disappearing resource base." John Hermans and Greg Minnick, *Guide to Forest Restoration and management in the Sahel*, Niamey: Ministry of Hydrology and the Environment Forestry and Land Use Planning Project (1987), p. 129.

50. The Annapurna Conservation Area Project in Nepal relies upon an indigenous system of grazing and wood cutting. Peter Poole, *Developing a Partnership of Indigenous Peoples, Conservationists and Land Use Planners in Latin America*, Washington, DC: World Bank (Policy, Planning, and Research Working Paper ) (1989), pp. 37-40. A recent publication, however, cautioned that "to label the project an unambiguous success ... would be premature. Michael Wells and Katrina Brandon, *People and Parks: Linking Protected Area Management with Local Communities*, Washington, DC: The World Bank (1992), p. 85. See also D.A. Gilmor and R.J. Fisher, *Villagers, Forests and Foresters: The Philosophy, Process and Practice of Community Forestry in Nepal*. Kathmandu: Sahayogi Press (1992).

51. Michael Cernea, *Land Tenure Systems and Social Implications of Forestry Development Programs*, World Bank Staff Working Paper No. 452 (1981).

52. See, e.g., DENR Special Order No. 31 (1990) creating the Task Force for the Delineation of Ancestral Domains in the Cordillera Administrative Region.

53. See, "Carino v. Insular Government," *United States Reports*, Vol. 212 (1909); Owen Lynch and Kirk Talbott, "Legal Responses to the Philippine Deforestation Crises," *Journal of International Law and Politics*, Vol. 20 (1988).

54. 1990 *Philippine Forestry Statistics*, Table 1. Since ancestral domains are already theoretically private in the Philippines, owners who lease them merely do so as a stop-gap measure to prevent arbitrary displacement. See, e.g. Owen Lynch and Kirk Talbott, "Legal Responses to the Philippine Deforestation Crises" *New York University Journal of International Law and Politics*, Vol. 20 (1988).

The successes of the communal prototypes, however, has not prompted the Philippine Government to recognize ancestral ownership. Instead, forestry officials and other advocates of the legal status quo cite the Imugan and Malutok-Magarang models as proof that the leasing of ancestral domains to their owners is a desirable development strategy. See, e.g., Luzviminda B. Cornista and Eva F. Escueta, "Communal Forest Leases as a Tenurial Option in the Philippine Uplands," *Keepers of the Forest*, Mark Poffenberger, ed. (1990).

55. For example, on December 3, 1981, the traditionally timid, indigenous Gubatnon Hanunoo Mangyan community of Malutok-Magarang in southern Mindoro leased 1340 hectares of its ancestral domain from the Philippine forestry bureau for a period of fifty years. Over the past decade, the agreement has helped the community in its efforts to protect the forest by resisting illegal logging and migration. It has also contributed to greater investment in more sedentary, irrigated farming. For additional background on this pilot project which helped lay the basis for the Philippines community forestry program, contact Owen Lynch, World Resources Institute.

56. For background on the West Bengal program see, e.g., S.B. Roy, "Forest Protection Committees in West Bengal: Emerging Policy Issues," *Voices from the Field: Fourth Annual Social Forestry Writing Workshop*, Honolulu: East-West Center (1991); *Forest Management Partnerships: Regenerating India's Forests*. New Delhi: Ford Foundation (1990). In Orissa, community-based initiatives encompass forest conservation as well as forest rehabilitation. See Shashi Kant, Neera

M. Singh and Kundan K. Singh. *Community Based Forest Management Systems (Case Studies from Orissa)*. Bhopal: Indian Institute of Forest Management (1991). See also Mark Poffenberger and Chhatrapati Singh, *Emerging Issues in Indian Forest Policy: The Legal Framework In Joint Management of Forest Lands*. Draft MS (1991); *Joint Forest Management Regulation Update 2992* New Delhi: society for the Preservation of Wastelands Development (1992).

57. For additional background see Owen Lynch and Janis Alcorn, *Empowering Local Forest Managers: Toward More Effective Recognition of the Rights, Contributions and Capacities of People Occupying "Public" Forest Reserves (i.e., Pah Sa-nguan) in the Kingdom of Thailand*. Janis Alcorn, co-author. World Resources Institute, Washington, DC (1992). A Thai translation was published in Bangkok by the Chulalongkorn University Social Research Institute (1992). For an update on the *Khor Jor Kor* program, and widespread opposition to it, see Sanitsuda Ekachai, "Torn from the Land" (January 23) and "Villages celebrate return to their land" (July 24), *Bangkok Post* (1992)

58. There are several pilot projects, most of which are funded by the Ford Foundation.

59. Frances J. Seymour, "Social Forestry on Public Lands in Indonesia: A Blurring of Ends and Means," *Social Forestry: Communal and Private Management Strategies Compared*, Washington, DC: Johns Hopkins University School of Advanced International Studies (1991), p. 32. See also Sopari Wangsadidjaja and Agus D. Ismanto, "The Legal Case for Social Forestry in Production Forests in Indonesia," *Voices from the Field: Fourth Annual Social Forestry Writing Workshop*, Honolulu: East-West Center (1991), pp. 94-112.

60. In their paper, *Traditional Land Tenures and Land Use Systems in the Design of Agricultural Projects*, Raymond Noronha and Francis J. Letham emphasized the importance of identifying not only customary owners, but "the person, or persons, who have the right to allocate land." World Bank Staff Working Papers No. 561 (1983), pp. 13-15.

61. Unfortunately, "while women have great potential as [resource] managers, current attempts to involve women in collaborative management are woefully inadequate". See generally, Mark Poffenberger, "Steps Towards Establishing Collaborative Forest Management, *Keepers of the Forest*, cited in footnote one at pp. 280-281. See also Jeffry Campbell, ed. *Women's Role in Dynamic Forest-Based Small Scale Enterprises: Case Studies on Uppage and Lacquerware from India*. Rome: Food and Agriculture Organization (1991).

62. See, e.g., Sandra Moniaga, "Towards Recognition of Adat Property Rights in the Outer Islands of Indonesia," *Voices from the Field: Fourth Annual Social Forestry Writing Workshop*. Honolulu: East-West center (1991), pp. 113-135; Charles Zerner, "Community Rights, Customary Law and the Law of Timber Concessions in Indonesia's Forests: Legal Options and Alternatives in Designing the Commons (March 1990); Owen Lynch and Kirk Talbott, "Legal Responses to the Philippine Deforestation Crises" *New York University Journal of International Law and Politics*, Vol. 20 (1988). Preliminary research being conducted by Lalanath de Silva and Owen Lynch indicates that the same holds true in Sri Lanka. The results of this research will be contained in a case study to be published by the World Resources Institute during 1993.

63. For a discussion of some of the changes needed see, e.g., Mark Poffenberger, "Change in Forest Bureaucracies," *Keepers of the Forest*, cited in footnote one at pp. 101-118; Michael Dove, *Foresters' Views about Forest Farmers*, Honolulu: East-West Center (1991).

64. The USAID Mission in Manila has committed \$25 million through its Natural Resources Management Program to establish and endow a Philippine environmental foundation which would provide financial assistance to Philippine NGOS.